APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER
GE, YUZHEN

ART UNIT	PAPER NUMBER
2624	

MAIL DATE	DELIVERY MODE
11/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-33* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *06 May 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Drawings

1.   The drawings are objected to because in Fig. 3, one dotted line goes outside of the box

and the meaning of the dotted line is not clear. Also the labels for the u' and v' axis are too

small and barely legible. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are

required in reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate prior

version of the sheet, even if only one figure is being amended. The figure or figure number of an

amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the

appropriate figure must be removed from the replacement sheet, and where necessary, the

remaining figures must be renumbered and appropriate changes made to the brief description of

the several views of the drawings for consistency. Additional replacement sheets may be

necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after

the filing date of an application must be labeled in the top margin as either "Replacement Sheet"

or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

Specification

2.   The disclosure is objected to because of the following informalities: "luminance space" is

not defined. Appropriate correction is required. The examiner will interpret it as the projection

onto luminance axis.

Claim Rejections - 35 USC § 102

3.   Claims 1-5, 11-16, 22-27 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated

by Lin et al (US Patent 6,181,445).

Regarding claim 1, Lin et al teach a method of correcting a color value generated by a forward

model for a color input device, comprising clipping the color value to a boundary of a visual

gamut in a color space (Fig. 6A, col. 11, lines 31-44, col. 2, lines 10-24, the gamut 133 in Fig.

6A is a visual gamut).

Regarding claim 2, Lin et al teach the method of claim 1, wherein clipping the color value

comprises:

        clipping a luminance of the color value in a luminance space (Fig. 6B, point 144 is

clipped to 145, point 141 to 142, col. 15, lines 46-61); and

        clipping a chromaticity of the color value in a chromaticity space (Fig. 6A, the clipping is

done on a two dimensional chromaticity of the color space).

Regarding claim 3, Lin et al teach the method of claim 2, further comprising clipping the

luminance at a lower bound (Fig. 6B, point 141 to point 142, col. 15, lines 46-61, e.g. luminance

levels from 0 to 40 are clipped to 30-40).

Regarding claim 4, Lin et al teach the method of claim 3, wherein the luminance is allowed to

exceed the luminance of a white point in the color space (col. 16, lines 8-31, the white point is

specified by the threshold and the luminance is allowed to exceed the threshold value).

Regarding claim 5, Lin et al teach the method of claim 2, wherein clipping the color value

further comprises:

    determining at the clipped luminance a locus of the visual gamut on a chromaticity plane

(Figs. 5A, 6A, 7 and 8 can be regarded as the locus of the visual gamut on a chromaticity plane,

the luminance can be the clipped luminance, col. 16, lines 8-23);

    determining a vector from a white point to the color value at the clipped luminance (Fig.

6A, the broken line can be regarded as the vector and the origin is the white point, col. 11, lines

39-44); and

    clipping the chromaticity of the color value to an intersection of the vector and the locus

(135 in Fig. 6A, col. 11, lines 39-44).

Regarding claim 11, Lin et al teach the method of claim 1, wherein the color space is CIELAB

(Figs. 3B, 5A-8, col. 10, lines 19-49, col. 11, lines 39-53).

Claims 12-16, 22 and 23-27, 33 are the corresponding system and media claims of claims 1-5

and 11. Lin et al teach a system (Figs. 1 and 12, col. 5, lines 17-28) and a computer readable

medium (col. 6, lines 21-41, Fig. 12). Thus Lin et al teach Claims 12-16, 22 and 23-27, 33 as

evidently explained in the above-cited passages.

Claim Rejections - 35 USC § 103

4.   Claims 6-10, 17-21 and 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Lin et al (US Patent 6,181,445) in view of Beretta (US Patent 5,416,890).

Regarding claim 6, Lin et al teach the method of claim 2. However they do not explicitly teach

wherein the boundary is the ISO standard CIE spectral locus on a chromaticity space. The CIE

spectral locus can be considered as a gamut on a chromaticity space. Therefore the same method

taught by Lin et al can be applied because the method of Lin et al does not constrain to any

specific gamut. Beretta explicitly shows the ISO standard CIE spectral locus on a chromaticity

space as a gamut or a subspace of a color space (Figs. 6-7 and 13-15A). It is desirable to

reproduce color images (col. 1, lines 25-50 of Lin et al) and to broaden applications of the

method taught by Lin et al to other gamut and it is desirable to have a system and method for

color selection and color modification in the context of a uniform color model (col. 5, line 63-

col. 6, line 40 of Beretta). Therefore it would have been obvious to one of ordinary skill in the

art, at the time of invention, to apply the method of Lin et al to gamut whose boundary is the ISO

standard CIE spectral locus on a chromaticity space as in the system and method of Beretta so

that color selection and modification is done in a uniform color model.

Regarding claims 7, 8, 9, 10, Lin et al and Beretta teach the method of claims 1 and 6. However

they do not explicitly teach wherein the chromaticity space is the CIE chromaticity xy plane/the

CIE Uniform Chromaticity Scale (TICS) u'v' plane and the color space is CIEXYZ and CIELUV.

Although Lin et al describe the method in CIELAB color space, the method can be applied to

any color space or any independent color space such as CIEXYZ and CIELUV and the clipping

method can be applied to any two dimensional space. Beretta further teach the CIE chromaticity

xy plane/the CIE Uniform Chromaticity Scale (TICS) u'v' plane and color space CIEXYZ and

CIELUV (col. 3, lines 21-32, Figs. 6-7 and 13-15A). It is desirable to broaden the application of

the method of Lin et al and use an independent color space depending on the needs of the

application. Therefore it would have been obvious to one of ordinary skill in the art, at the time

of invention, to apply the method of Lin et al to the chromaticity space which is the CIE

chromaticity xy plane/the CIE Uniform Chromaticity Scale (TICS) u'v' plane and to the color

space which is CIEXYZ and CIELUV.

Claims 17-21 and 28-32 are the corresponding system and media claims of claims 6-10. Lin et al

teach a system (Figs. 1 and 12, col. 5, lines 17-28) and a computer readable medium (col. 6, lines

21-41, Fig. 12). Thus Lin et al and Beretta teach Claims 17-21 and 28-32 as evidently explained

in the above-cited passages.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Yuzhen Ge whose telephone number is 571-272 7636. The

examiner can normally be reached on 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Yuzhen Ge
Examiner
Art Unit 2624

WENPENG CHEN
PRIMARY EXAMINER

3/28/07